

PROPORTIONAL PRE COMPENSATED VALVES



Patented

Connector to be ordered separately, see page 103.

ORDERING CODE

CXDH	Proportional compensated bankable valve															
3	Size															
*	Mounting (see table 1)															
*	Body type: A = Ports G3/8" parallel G = Interface for modular valves B = Ports SAE 9/16" - 18UNF L = Ports G3/8" parallel with valves LSA LSB M = Interface for modular valves with valves LSA LSB															
**	Type of spool (1) 03 =															
N	Symmetrical flow path control															
*	Flow rating <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>*</th> <th>Δp 8bar</th> <th>Δp 4bar</th> </tr> </thead> <tbody> <tr> <td>D</td> <td>8 l/min</td> <td>6 l/min</td> </tr> <tr> <td>2</td> <td>16 l/min</td> <td>12 l/min</td> </tr> <tr> <td>3</td> <td>22 l/min</td> <td>18 l/min</td> </tr> <tr> <td>4</td> <td>35 l/min</td> <td>28 l/min</td> </tr> </tbody> </table>	*	Δp 8bar	Δp 4bar	D	8 l/min	6 l/min	2	16 l/min	12 l/min	3	22 l/min	18 l/min	4	35 l/min	28 l/min
*	Δp 8bar	Δp 4bar														
D	8 l/min	6 l/min														
2	16 l/min	12 l/min														
3	22 l/min	18 l/min														
4	35 l/min	28 l/min														
*	Differential pressure Δp 8 = Δp 8 bar 4 = Δp 4 bar															
*	Max. current at solenoid (2): E = 2.35 A (9 Vdc) - Special coil F = 1.76 A (12 Vdc) G = 0.88 A (24 Vdc)															
**	Variants (3): S1 = No variant LF/LV = Emergency control lever (see page 72) For body type G and M order LR variant (emergency lever 180° rotated) SV = Viton ES = Emergency button (4) P2 = Rotary emergency (4) R5 = Rotary emergency 180° (4) AJ = AMP Junior coil (see page 109) CZ = Deutsch DT04-2P coil (see page 109)															
1	Serial No.															

Calibrated diaphragms on P line, see page 102.

- (1) Available spool 01 A and B ports are not sealed: fluid can escape from LS line (see hydraulic scheme).
- (2) Coils technical data, see page 109
Voltage codes are not stamped on the plate, their are readable on the coils
- (3) Connector to be ordered separately, see page 103; Other variants available on request.
- (4) Emergency see page 72

Stackable proportional directional valves CXDH with LS signal locally compensated

- Used for controlling fluid direction and flow rate as a function of the supply current to the proportional control solenoid.
- Flow regulation load independent.
- Load compensation is achieved by a 2 way pressure compensator which holds, the pressure drop constants across the proportional spool.
- Emergency control.
- Threaded ports or interface for modular valves
- Regulated flow rate until 35 l/min.
- Standard connectors DIN 43650 ISO 4400, AMP Junior and Deutsch
- Cast iron zinc plated body.

FEATURES

Max. operating pressure	300 bar
Max. operating pressure ports T (Pressure dynamic allowed for 2 millions of cycles)	250 bar
Regulated flow rate (A / B ports)	up to 35 l/min
Relative duty cycle	Continuous 100% ED
Type of protection (Hirschmann coil)	IP 65
Fluid viscosity	10 ÷ 500 mm ² /s
Fluid temperature	-20°C ÷ 75°C
Ambient temperature	-20°C ÷ 60°C
Max. contamination level (filter $\beta_{10} \geq 75$)	ISO 4406:1999: class 19/17/14 NAS 1638: class 8
Weight with single solenoid	2.38 kg
Weight with double solenoid	2.77 kg

Solenoid	@ 9Vdc	@ 12Vdc	@ 24Vdc
Current supply	PWM (pulse width modulation)		
Max. current solenoid	2.35 A	1.76 A	0.88 A
Solenoid coil resistance at 25°C (77°F)	2.25 Ohm	4.0 Ohm	16.0 Ohm
PWM or superimposed dither frequency	100 ÷ 150 Hz		
Response time			
0 ÷ 100%	32 ms	40 ms	85 ms
100% ÷ 0	33 ms	33 ms	33 ms
Frequency response -3db (input signal 50% ±25% Vmax)	22 Hz	22 Hz	12 Hz

Operating specifications are valid for fluid with 46 mm²/s viscosity at 40°C, using the specified Dana Brevini electronic control units. (input voltage = 24V).

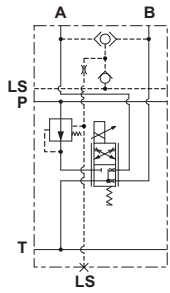
Accessories

REM.S.RA.*.*. REM.D.RA.*.*.	Card type control for single and double solenoid
CEP.S...	Electronic amplifier plug version for single solenoid
MAV	Electronic module for integrate control of proportional valves and ON/OFF
JMPEI0M700101	Joystick with standard handle
JMPIU0M700138	Joystick Person present handle
Modular valves	CM3P (page 93) and CM3M (page 95)

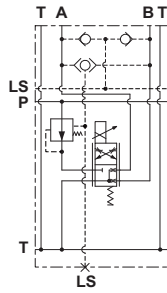
Tab.1 - Mounting

Code	Symbol
C	
A	
B	

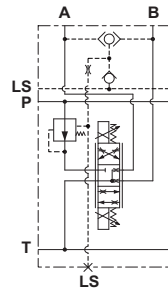
HYDRAULIC SYMBOLS



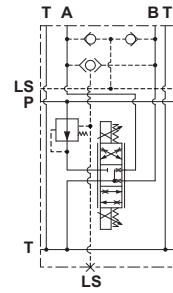
CXDH3AA03 ..



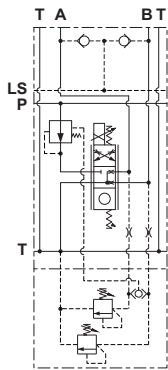
CXDH3AG03 ..



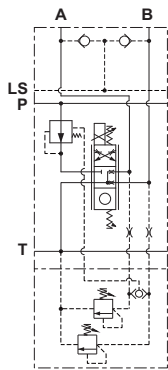
CXDH3CA03 ..



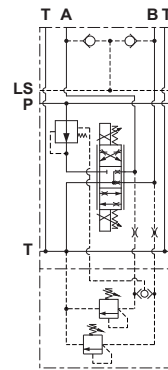
CXDH3CG03 ..



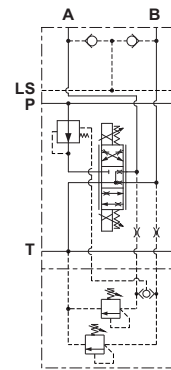
CXDH3AM03 ..



CXDH3AL03 ..



CXDH3CM03 ..



CXDH3CL03 ..

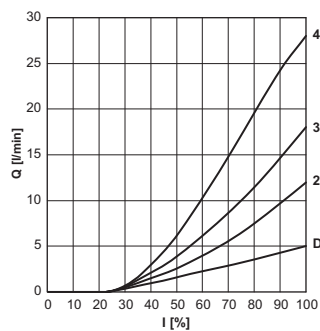
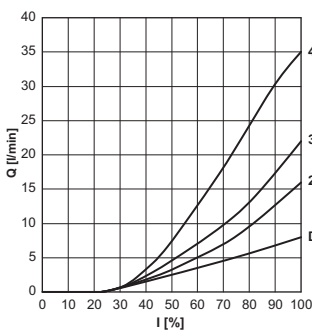
* Thanks to the design of the modular body (type G), an anti-shock modular valve can work same with CXDH3 valve energized or de-energized (see hydraulic symbol)

CHARACTERISTIC CURVES

I-Q curves - (Curves acquired with REM card, opening stroke)

Differential Pressure $\Delta p = 8$ bar

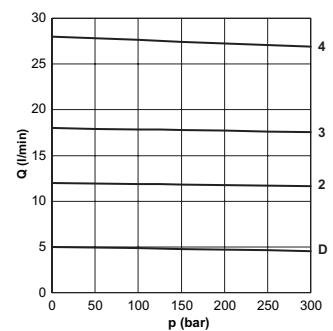
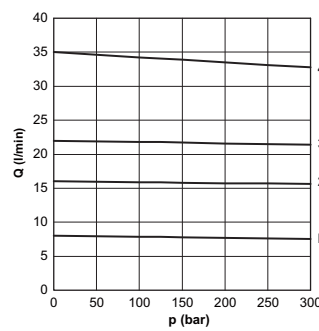
Differential Pressure $\Delta p = 4$ bar



Compensation curves (curves acquired with FEH30.PQ inlet module)

Differential Pressure $\Delta p = 8$ bar

Differential Pressure $\Delta p = 4$ bar

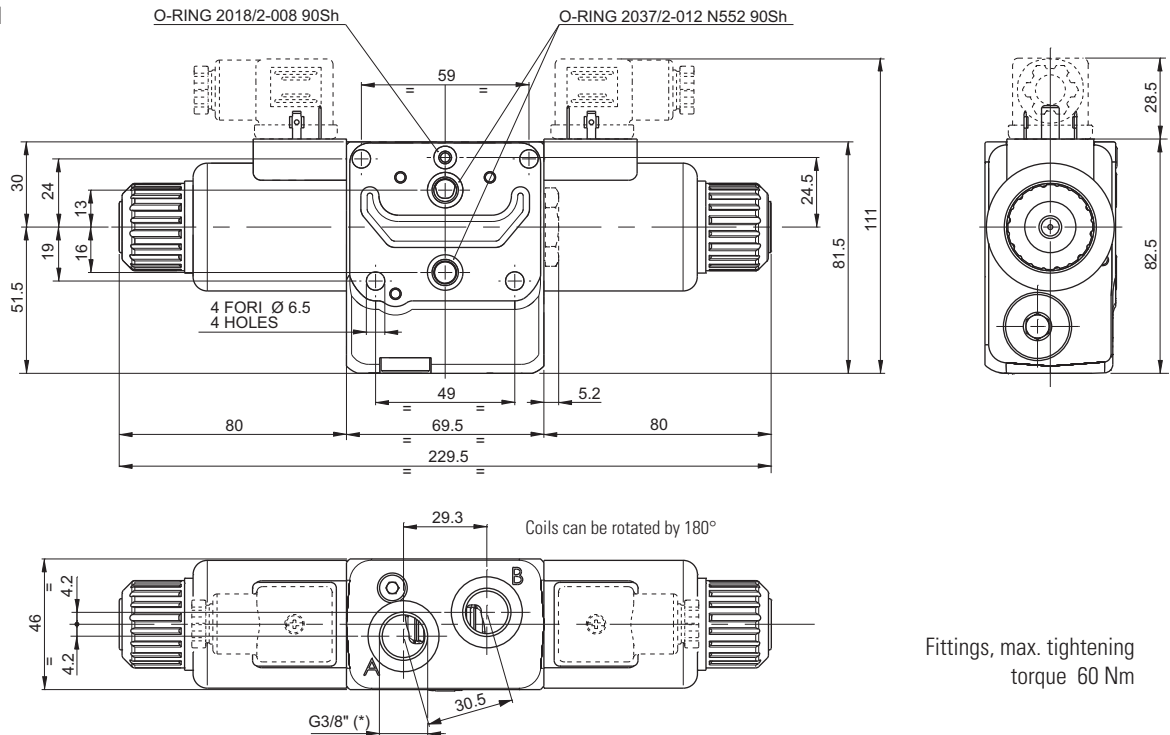


The fluid used is a mineral based oil with a viscosity of 46 mm²/s at 40°C. The tests have been carried out with a fluid of a 40°C.

OVERALL DIMENSIONS

Body type A

Ports G3/8" Parallel

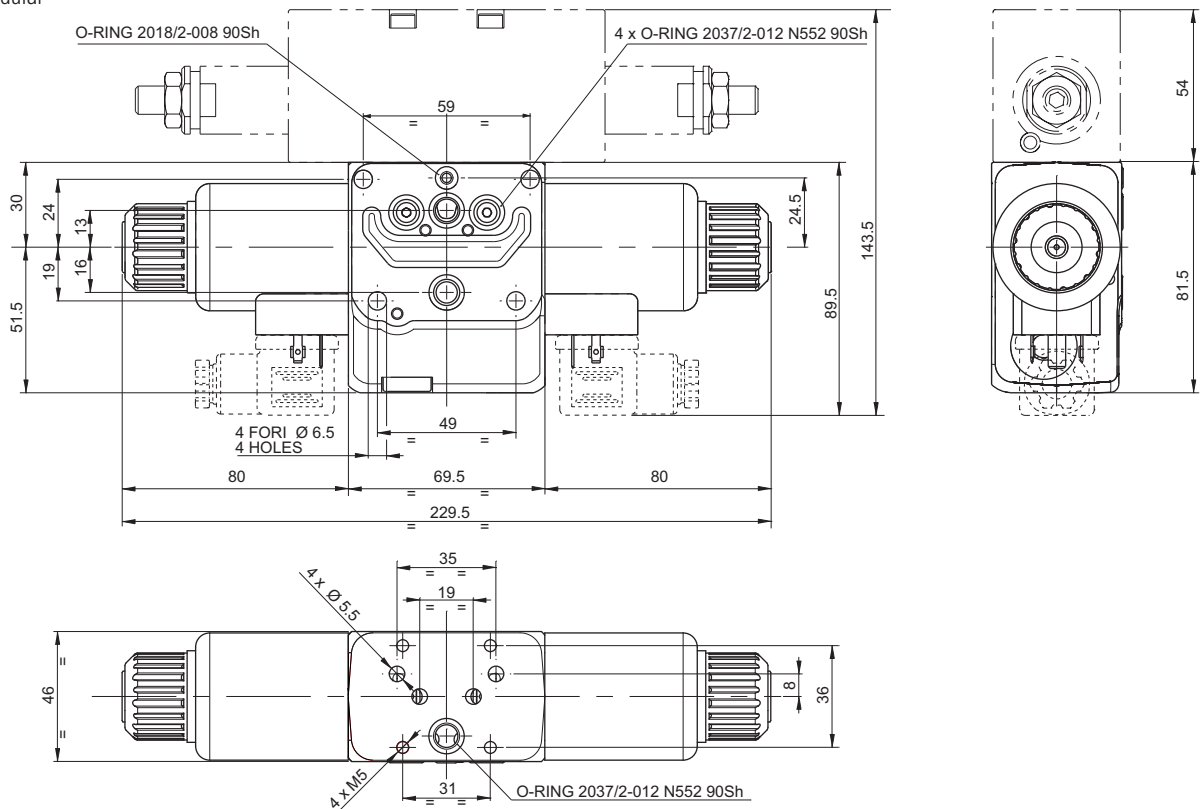


Fittings, max. tightening torque 60 Nm

1

Body type G

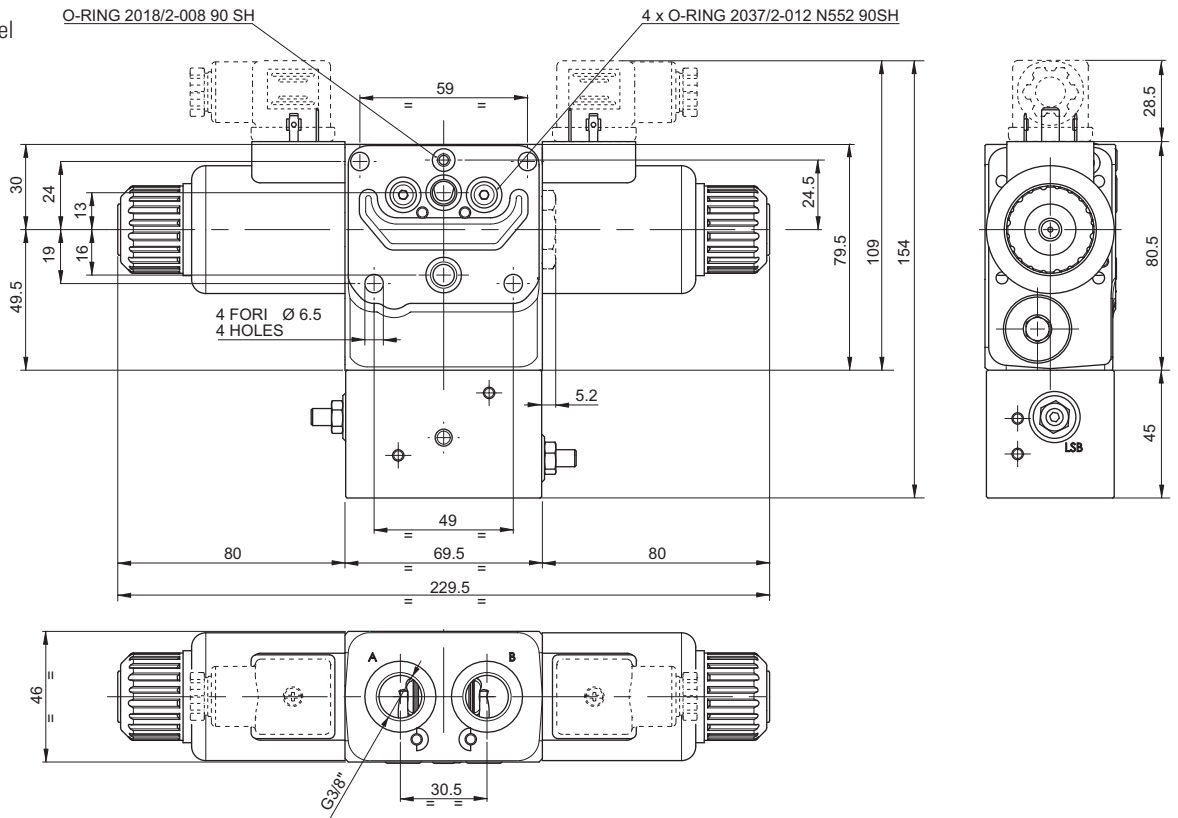
Interface for modular valves



OVERALL DIMENSIONS

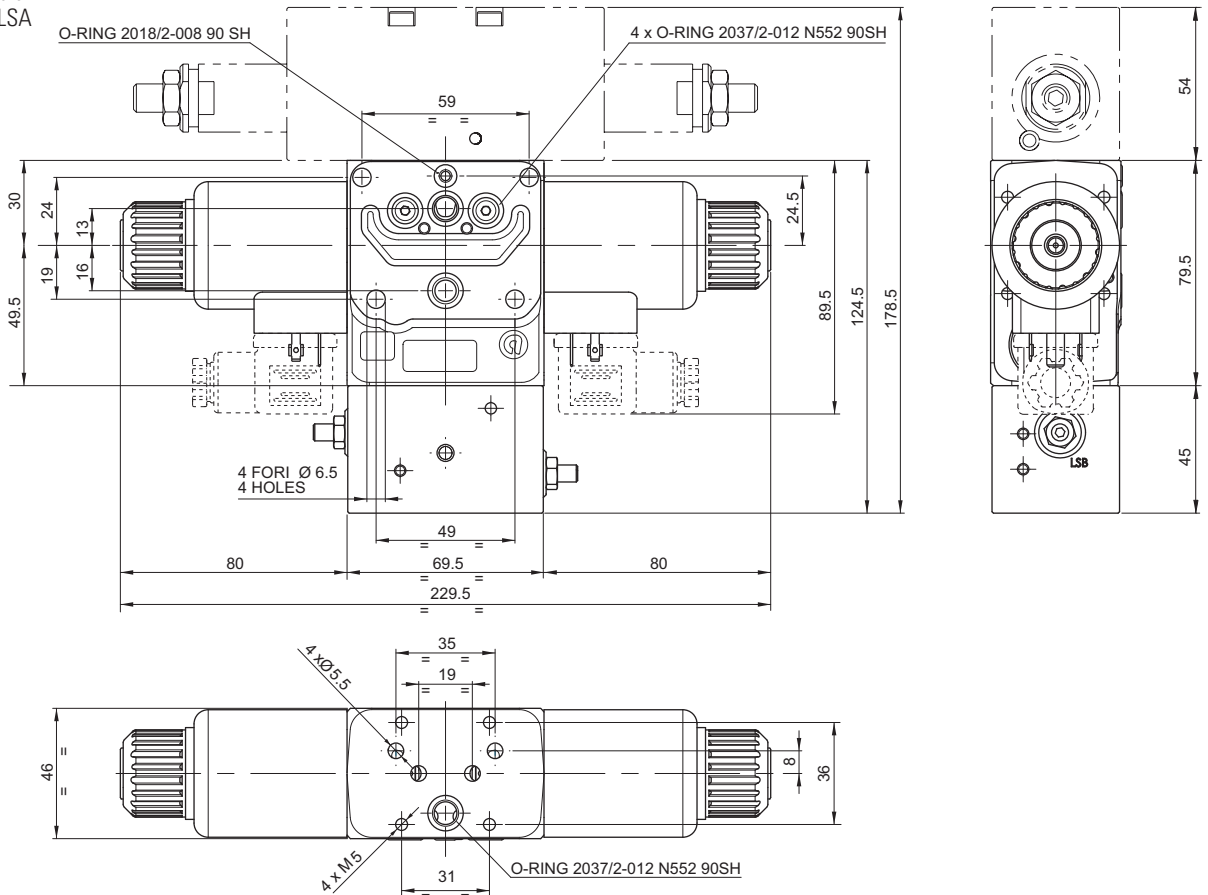
Body type L

Ports G3/8" parallel
with valves LSA LSB



Body type M

Interface for modular
valves with valves LSA
LSB



CXDH3 / CDH3 (variants)

"LF", "LR" AND "LV" VARIANTS - EMERGENCY CONTROL LEVER



HYDRAULIC SYMBOL

Var. LF/LR lever on the side A:



Var. LV lever on the side B:



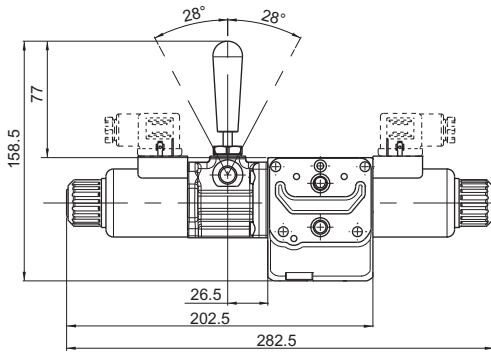
Spool 01 available on request

Max operating pressure port T	dynamic	160 bar
	static	210 bar
Mounting type Var. LF/LR	C - B - F - H	
Mounting type Var. LV	C-A	
Spools type	01-02-03-04 16-17-66	
Weight with single solenoid	3.34 kg	
Weight with double solenoid	3.73 kg	

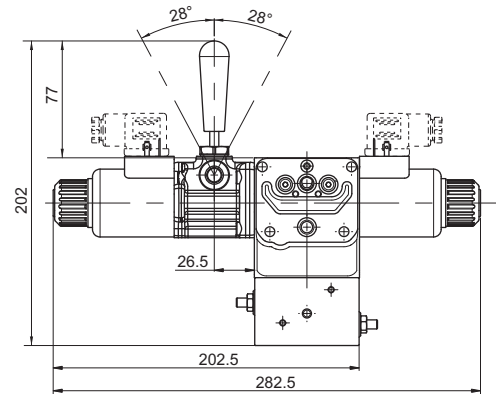
Thanks to his flexibility, the component is designed to be inserted between the valve body and the spool, providing total interchangeability between the different types of solenoid body valves manufactured by Dana Brevini (*). The control can be used as an emergency device in the event of power cuts.

* Max flow of proportional valves can be reduced compared to versions without emergency control lever when electrical operated. Max flow of proportional valves lever operated is increased compared to the max flow given when valves are electrical operated.

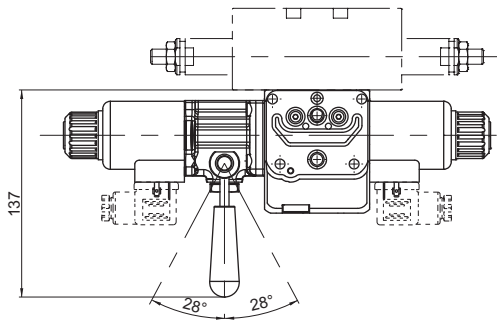
**LF Variant
(CXDH3 / CDH3)**



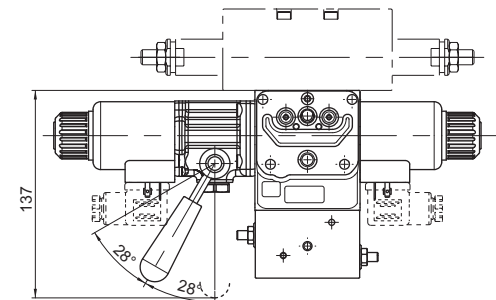
**LF Variant
Body L
(CXDH3)**



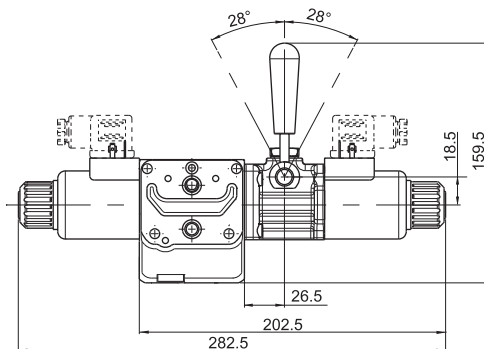
**LR Variant
(CXDH3 / CDH3)**



**LR Variant
M Body
(CXDH3)**



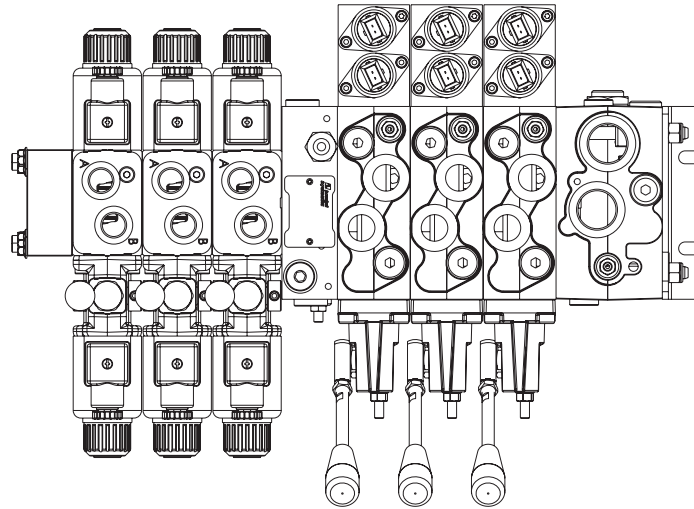
**LV Variant
(CXDH3 / CDH3)**



USE OF HSIF INTERFACE WITH MODULAR VALVES CXDH3/CDH3, WITH EMERGENCY LEVER

Distributor HPV41 right (DX, standard)

- Order modular valves CXDH3/CDH3 variant LV, with emergency lever on the side B

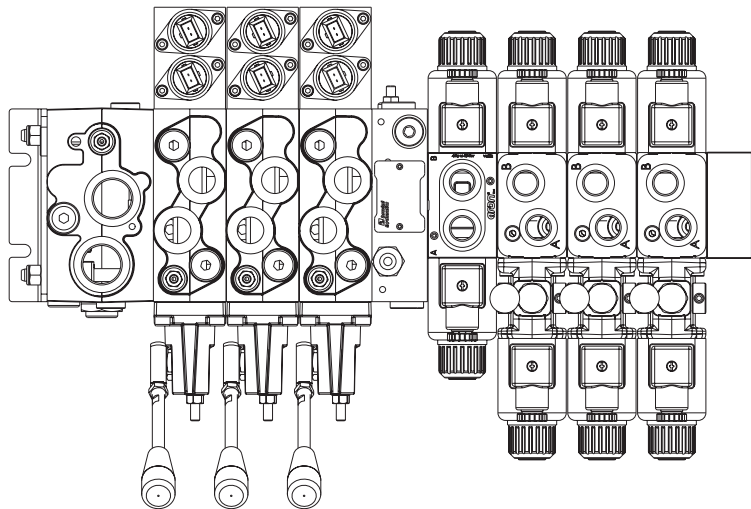


1

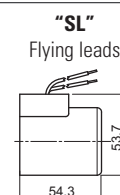
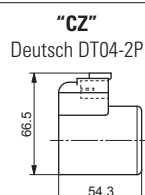
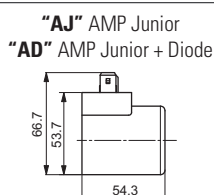
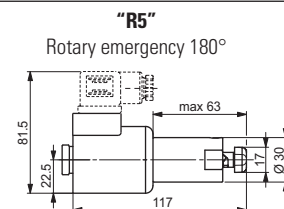
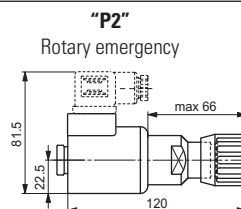
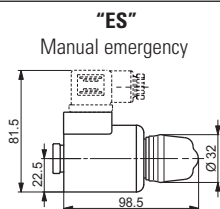
Distributor HPV41 left (SX)

- Order modular valves CXDH3/CDH3 variants LF / LR, with emergency lever on side A

- In this case it is not possible to mount the modular valve CXDH3/CDH3 variant LF / LR as the first element after HSIF interface.



OTHER VARIANTS



Emergency P2 and P5, tightening torque max. 6÷9 Nm (CH n. 22)